



ELSEVIER

Coordination Chemistry Reviews 200–202, Complete,
May 2000COORDINATION
CHEMISTRY
REVIEWSwww.elsevier.com/locate/CCR

Contents

Preface

A.B.P. Lever	1
Preface to Volume 100	3

Coordination Chemistry

Template routes to interlocked molecular structures and orderly molecular entanglements T.J. Hubin and D.H. Busch	5
The complexation thermodynamics of light lanthanides by crown ethers Y. Liu, B.-H. Han and Y.-T. Chen	53
Formation of multinuclear complexes: new developments from cyclam derivatives A. McAuley and S. Subramanian	75
Bimetallic dioxygen complexes derived from 'end-off' compartmental ligands M. Suzuki, H. Furutachi and H. Ōkawa	105
Mononuclear, oligonuclear and polynuclear metal coordination compounds with 1,2,4-triazole derivatives as ligands J.G. Haasnoot	131
Syntheses and solid-state structural chemistry of polytelluride anions D.M. Smith and J.A. Ibers	187
Molecular mechanics and chemical reactivity. A model study of steric effects influencing Co(III) phosphate ester hydrolysis I.M. Atkinson and L.F. Lindoy	207
Coordination compounds in the entatic state P. Comba	217

Bio-Inorganic Chemistry

The distribution of elements in cells R.J.P. Williams and J.J.R. Frausto da Silva	247
--	-----

The table of contents of *Coordination Chemistry Reviews* is included in ESTOC – Elsevier Science Tables of Contents service — which can be accessed on the World Wide Web at the following URLs:
<http://www.elsevier.nl/locate/estoc> or <http://www.elsevier.com/locate/estoc>

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. Please refer to the online version of the Guide for Authors at <http://www.elsevier.com/locate/CCR>

Contents

Coordination chemistry with <i>meso</i> -hydroxylated porphyrins (oxophlorins), intermediates in heme degradation A.L. Balch	349
The continuing story of dinitrogen activation M.D. Fryzuk and S.A. Johnson	379
The application of electrochemical scanning probe microscopy to the interpretation of metalloprotein voltammetry J.J. Davis, H.A.O. Hill and A.M. Bond	411
Understanding the dioxygen reaction chemistry of diiron proteins through synthetic modeling studies J. Du Bois, T.J. Mizoguchi and S.J. Lippard	443
Multiplicity of metal ion binding patterns to nucleobases B. Lippert	487
Biomimetic nonheme iron catalysts for alkane hydroxylation M. Costas, K. Chen and L. Que Jr.	517
The nitrogenase catalyzed N ₂ dependent HD formation: a model reaction and its significance for the FeMoco function D. Sellmann, A. Fürsattel and J. Sutter	545
Quantification of isomeric equilibria for metal ion complexes formed in solution by phosphate or phosphonate ligands with a weakly coordinating second site H. Sigel and L.E. Kapinos	563
Electronic structures of active sites in electron transfer metalloproteins: contributions to reactivity E.I. Solomon, D.W. Randall and T. Glaser	595
Understanding the copper–phenoxyl radical array in galactose oxidase: contributions from synthetic modeling studies B.A. Jazdzewski and W.B. Tolman	633
Organometallic Chemistry	
Transition metal hydrides as ligands A. Albinati and L.M. Venanzi	687
Recent advances in homogeneous enantioselective Diels–Alder reactions catalyzed by chiral transition-metal complexes D. Carmona, M. Pilar Lamata and L.A. Oro	717
Metallacarboranes in the new millennium R.N. Grimes	773
Structure and bonding in homoleptic transition metal hydride anions R.B. King	813
Charge-transfer bonding in metal–arene coordination S.M. Hubig, S.V. Lindeman and J.K. Kochi	831
Physical-Inorganic Chemistry	
Effects of driving force on the rates of intramolecular and bimolecular electron-transfer reactions H.B. Gray, J.R. Winkler, D. Wiedenfeld	875
Flash and continuous photolysis studies of Roussin's red salt dianion Fe ₂ S ₂ (NO) ₄ ²⁻ in solution J.L. Bourassa and P.C. Ford	887
Spectroscopic and mass spectrometric methods for the characterisation of metal clusters B.F.G. Johnson and J.S. McIndoe	901

Contents

The life and times of excited states of organometallic and coordination compounds A. Vlček Jr.	933
Electrochemistry of coordination compounds — origin, development and outlook. A personal essay A.A. Vlček	979
Excited state properties of organometallic compounds of rhenium in high and low oxidation states A. Vogler and H. Kunkely	991
Spectroscopic identification of gas phase photofragments from coordination compound chemical vapor deposition precursors J. Cheon, H.-K. Kang and J.I. Zink	1009
Author Index	1033
Subject Index	1035

US Mailing notice

Coordination Chemistry Reviews (ISSN 0010-8545) is published monthly by Elsevier Science S.A. (P.O. Box 564, 1001 Lausanne). Annual subscription price in the USA US\$3707 (valid in North, Central and South America), including air speed delivery. Application to mail at periodical postage rate is pending at Jamaica, NY 11431.

USA POSTMASTER: Send address changes to *Coordination Chemistry Reviews*, Publications Expediting, Inc., 200 Meacham Avenue, Elmont, NY 11003.

AIRFREIGHT AND MAILING in the USA by Publications Expediting Inc., 200 Meacham Avenue, Elmont, NY 11003.

Advertising information: Advertising orders and enquiries may be sent to: **USA, Canada and**

South America: Mr Tino de Carlo, The Advertising Department, Elsevier Science Inc., 655 Avenue of the Americas, New York, NY 10010-5107, USA; Tel.: (+1) (212) 633 3815; Fax: (+1) (212) 633 3820; e-mail: t.decarlo@elsevier.com. **Japan:** The Advertising Department, Elsevier Science K.K., 9-15 Higashi-Azabu 1-chome, Minato-ku, Tokyo 106-0044, Japan; Tel.: (+81) (3) 5561 5033; Fax: (+81) (3) 5561 5047. **Europe and ROW:** Rachel Leveson-Gower, The Advertising Department, Elsevier Science Ltd., The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK; Tel.: (+44) (1865) 843565; Fax: (+44) (1865) 843976; e-mail: r.leveson-gower@elsevier.co.uk